that the claimed invention would not have been anticipated by or rendered obvious in view of the cited references.

Independent claims 1 and 11 are directed to a method and system for preventing or reducing vibration around a structure which generates vibration or receives vibration. Claim 1 requires "disposing a plurality of adjoining column members and an elastic member underground directly underneath or around said structure, said column members forming a hard layer contiguous with said elastic member, wherein said column members have a greater stiffness than the surrounding ground." Similarly, claim 11 requires "a plurality of adjoining column members disposed around a periphery of said elastic member, said column members forming a hard layer contiguous with said elastic member, wherein said elastic member and said column members are disposed underground directly beneath or around said structure, said column members have a greater stiffness than the surrounding ground."

With regard to claims 1 and 14, the Examiner asserts that:

> Shinohara discloses a method comprising disposing a plurality of adjoining column members and an elastic member, which can be viewed as plate members (4) and cushioning material (3), respectively in the embodiment of Figs. 5 and 6, or the layers (2A) and (2B) in the embodiment of Figs. 1-4. As Figs. 1 and 5 illustrate, these column members and elastic material are underground directly underneath or around the structure. The plate members (4) or (2A) form a hard layer contiguous with the cushioning material (3) or (2B), and inherently, generally the column members will have a greater stiffness than the surrounding ground due to the nature of the structure.

However, Applicant respectfully submits that it is quite clear that Shinohara does not teach or suggest a hard layer formed by a plurality of adjoining column members as required by

the claims.[1] As shown in Figs. 1 and 6, Shinohara discloses a ground vibration reducer 2 (10) which includes a plurality of shock absorbing materials 3 (3A) contacting an underground external wall 1A of a structure (such as a pile 9), and a shell-shaped plate member 4 (4A) surrounding the shock absorbing materials 3. As shown in Fig. 2-4, the shock absorbing materials 2 (3) are each formed a lamination of alternating layers of resin material 2B and steel plates 2A. As shown in Figs. 5 and 6, a ground vibration reducer 10 is disposed around a foundation pile 9, wherein a plate member 4A is formed in the shape of a cylinder and shock absorbing materials 3A are provided between the plate member 4A and the foundation pile 9 at a plurality of locations.

Shinohara's objective is to utilize a multiple of shock absorbing devices (Fig. 2) that work exclusively for the shear action as seen in Fig. 3. The shock absorbing devices are positioned directly on the foundation side face as shown in Figure. 1

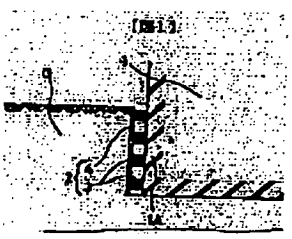

Fig.1

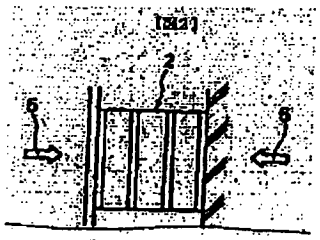

Fig.2

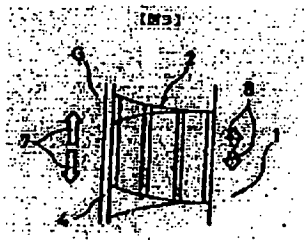

Fig.3

The shock absorbing device includes a lamination of steel plates with an elastic material or resin. See Fig. 4.

[1] The term "adjoining" is defined by Webster's Encyclopedic Unabridged Dictionary of the English Language (1996) as "being in contact at some point or line; ... bordering; contiguous".

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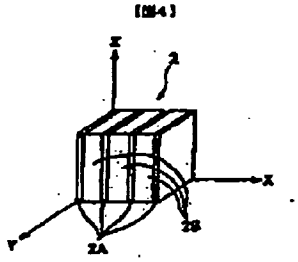

Fig.4

The positioning of the shock absorbing devices with respect to a structural pile foundation is illustrated in Fig. 5 or Fig. 6. In this case, the devices are positioned independently for respective piles and are expected to work for reducing the incoming vibration from outside by deforming vertically and separately. No direct interaction exists among these devices over individual piles.

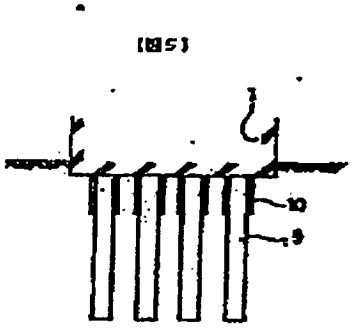

Fig.5

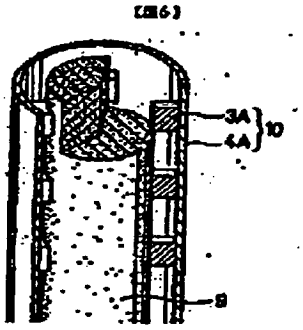

Fig.6

Therefore, Shinohara aims at reducing the vertical vibration by only vertically positioned energy-absorbing devices that have no horizontal placement. Shinohara's claims define small shear rigidity in the devices. The set up position is specified directly on the foundation surface in the embedded portion.

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Nowhere does Shinohara teach or suggest a plurality of plate members 4, 4A or steel plates 2A which are "adjoining" (i.e., in direct contact with another) so as to form a hard layer contiguous with an elastic member, as claimed. That is, Shinohara simply discloses the ground vibration reducer includes a single plate member 4 (4A) surrounding a plurality of shock absorbing materials 3, 3A. Further, the steel plates 2A of the shock absorbing material 2 shown in Fig. 4 are not adjoining column members as required by the claims. In Figure 5, the ground vibrations reducers 10 are separate from each other such that the plate members 4 of the respective ground vibration reducers 10 are not contiguous/adjoining.

Accordingly, Applicant respectfully submits that claims 1-26 should be allowable over Shinohara and Toschi because the cited references do not teach or suggest all of the features of the claimed invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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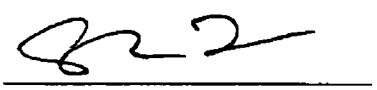
The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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